

## ABSTRACT OF THE DISCLOSURE

To provide an embedded information/alteration detection apparatus as well as an embedded information/alteration detection method, and a computer-readable record medium storing an embedded information/alteration detection program therein, which can embed and read out information without any change in the "significance" and "quality" of represented data. In an embedded information apparatus, a plurality of structural data are sorted on the basis of a first rule, a message digest is calculated for a sorted result, and the sorted result is further sorted on the basis of a second rule that is different from the first rule by using a calculated result as a key. In an information alteration detection apparatus, a plurality of structural data are sorted on the basis of a first rule, a message digest is calculated for a sorted result, and the sorted result is further sorted on the basis of a second rule by using a calculated result as a key. The sorted result, and the data before being sorted on the basis of the first rule are compared. If they agree, the absence of any alteration is decided, and if they do not agree, the presence of any alteration is decided.